A NEW SPECIES, AND NOTES ON A PREVIOUSLY DESCRIBED SPECIES, OF AUSTROMENOPON BEDFORD, 1939 (MALLOPHAGA: AMBLYCERA) FROM ALCIDS (AVES: CHARADRIIFORMES)

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ABSTRACT—*Austromenopon* **phippsi** n. sp. from *Uria lomvia* (L.) and *Austromenopon nigropleurum* (Denny) from *Fratercula arctica* (L.) and *Plautus alle* (L.) collected in Newfoundland, Canada are described and illustrated.

Timmermann (1954) described several new species of *Austromenopon* Bedford, 1939 from charadriiform birds, including some from auks (Alcidae), utilising size of the organisms and shape of the male genitalia as his main diagnostic criteria. The same author (Timmermann, 1957) reviewed the mallophagan parasites, including the genus *Austromenopon*, of members of the order Chadriiformes (Aves). Clay (1959) erected a key to the known species of this amblyceran genus parasitic on this order of birds. During the course of a study of the ectoparasites of alcids (auks) in Newfoundland a new species of *Austromenopon* was recovered from *Uria lomvia* (L.), its description being given below. *Austromenopon nigropleurum* (Denny, 1842) recovered from *Fratercula arctica* (L.) and *Plautus alle* (L.) is redescribed and illustrated. All measurements are given in microns (μm). Holotype and allotype locality indicated by an asterisk (*) in the text.

Austromenopon phippsi Eveleigh and Threlfall, new species
Fig. 1, 2a

Host: *Uria lomvia* (Linnaeus)

Location: Mainly on breast (85 percent)

Locality: *Hillgrade, New World Island, Notre Dame Bay (49°32'N, 54°47'W); Green Island, Witless Bay (47°15'N, 52°47'W).

Description: Number examined 47 (26 female, 21 male. Holotype female (USNM #72915), allotype male (USNM #72916). External morphology and chaetotaxy of female as shown in fig. 1. Shape of male genitalia detailed in fig. 2a. Measurements of holotype, allotype and paratypes are given in Table 1.

Discussion: *Austromenopon phippsi* n. sp. belongs to the *nigropleurum* group as noted in Clay (1959). The nearest apparent relative of this species is *A. uriae* Timmermann, 1954, but differs from the latter species, which was only very briefly and inadequately described, in the size and shape of the male genitalia (fig. 2a, 2c). The parameres are relatively much larger, straighter and stouter than in *A. uriae*

Table 1. Measurements (in microns) of *Austromenopon phippsi* n.sp. from *Uria lomvia*.

Region	Holotype		Paratypes*				Allotype		Paratypes**			
			length		width				length		width	
	length	width	mean	range	mean	range	length	width	mean	range	mean	range
Head	260	452	265	255–276	457	442–468	234	411	238	224–250	410	400–426
Prothorax	182	384	193	172–234	390	380–400	151	343	164	146–192	344	322–359
Mesothorax Metathorax	187	–	185	182–192	–	–	140	–	149	140–156	–	–
Abdomen	946	676	964	931–988	711	676–754	603	520	610	562–645	512	499–520
Total	1570	–	1591	1565–1617	–	–	1118	–	1153	1092–1227	–	–
Paramere (left)	–	–	–	–	–	–	68	–	68	–	–	–
Cephalic Index	1.74		1.72(1.68–1.78)				1.76		1.72(1.70–1.79)			

* 6 measured, ** 5 measured.

Table 2. Measurements (in microns) of *Austromenopon uriae* Timmermann, 1954 from *Uria aalge* (Pont.).

	Austromenopon uriae							
	female*				male**			
	length		width		length		width	
Region	mean	range	mean	range	mean	range	mean	range
Head	267	260–276	458	452–463	249	244–250	410	401–416
Prothorax	183	182–187	391	374–405	156	156	331	312–343
Mesothorax Metathorax	167	151–177	–	–	139	130–151	–	–
Abdomen	1005	962–1040	724	692–754	672	655–686	532	515–546
Total	1626	1570–1690	–	–	1238	1201–1274	–	–
Paramere (left)	–	–	–	–	61	57–62	–	–
Cephalic Index		1.72(1.67–1.78)				1.67(1.62–1.68)		

* 5 measured, ** 5 measured.

(fig. 2c). The genital sac contains a clearly sclerotised tubular "penis point" and a small sclerotised bar in the anterior region of the sac. Specimens of *A. uriae* that were examined (Table 2) had only a very lightly sclerotised "penis point" and the bar was absent. This is the first record of a member of this mallophagan genus from *Uria lomvia*. This species is named after Professor John Phipps, Head, Department of Biology, Memorial University of Newfoundland.

Austromenopon nigropleurum (Denny, 1842)
fig. 3, 2b, 2d

Host: *Fratercula arctica* (Linnaeus), *Plautus alle* (Linnaeus)
Location: Mainly on breast
Locality: Hillgrade, New World Island, Notre Dame Bay (49°32'N, 54°47'W)
Description: Number examined 36 (24 female, 12 male) from *F. arctica*; 17 (13 female, 4 male) from *P. alle*. Specimens have been deposited in the Canadian National Collection and the United States National Museum. External morphology and chaetotaxy of female as shown in fig. 3. Shape of male genitalia detailed in fig. 2b, 2d. Measurements of specimens from both bird species are given in Table 3.

Discussion: To date the only *Austromenopon* species described from *F. arctica* is *A. fraterculae* Timmermann, 1954. Clay (1959) suggested that the type specimen of *A. fraterculae* is a straggler from a petrel, almost certainly *Puffinus p. puffinus*. Timmermann (1963) while agreeing, in part, with Clay's comments, would not declare specimens of *Austromenopon* from *Puffinus p. puffinus* to be conspecific with his *A. fraterculae*. During a study of the ectoparasites of alcids in Newfoundland, specimens of *Austromenopon* were recov-

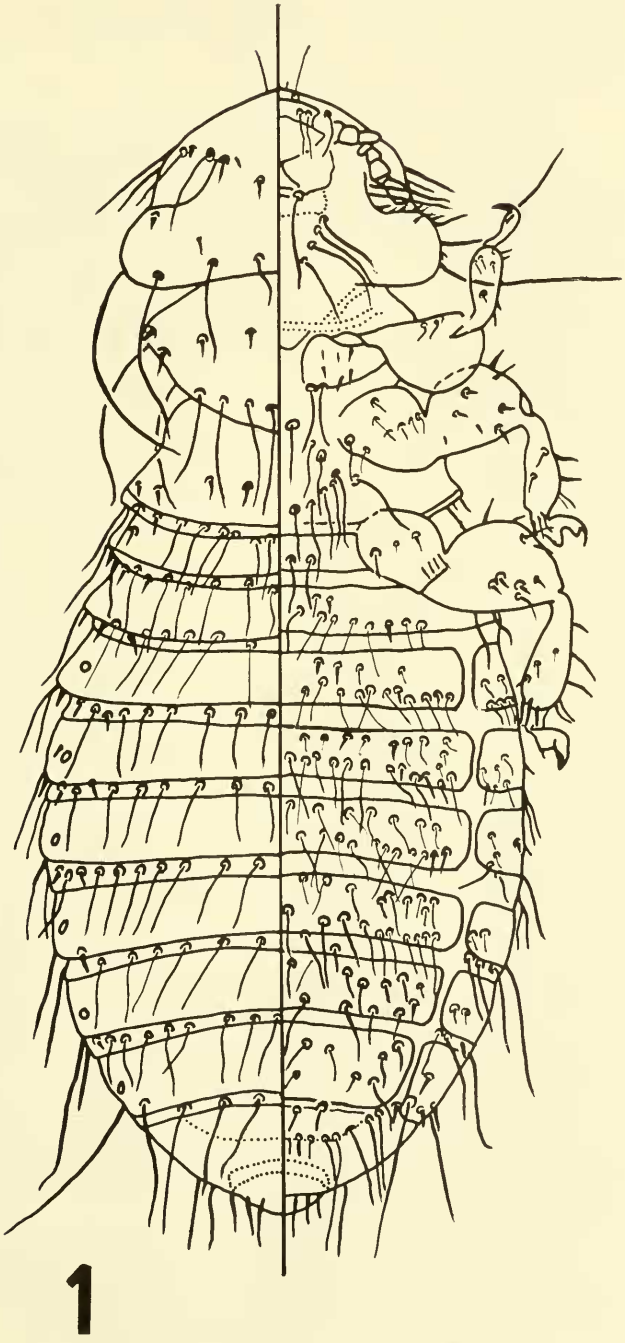

Fig. 1. *Austromenopon phippsi.* Dorsal-ventral view of female.

Table 3. Measurements (in microns) of *Austromenopon nigropleurum* (Denny, 1842) from *Fratercula arctica* and *Plautus alle*.

	Fratercula arctica							
	Female*				Male**			
	length		width		length		width	
	mean	range	mean	range	mean	range	mean	range
Head	281	270–291	475	468–478	254	239–270	423	411–432
Prothorax	195	187–213	399	385–411	160	156–161	353	343–374
Mesothorax Metathorax	178	161–187	–	–	160	140–177	–	–
Abdomen	992	936–1050	722	686–738	587	546–686	511	494–541
Total	1645	1570–1664	–	–	1156	1086–1264	–	–
Paramere (left)	–	–	–	–	59	57–62	–	–
Cephalic Index		1.69(1.63–1.77)				1.67(1.54–1.81)		
	Plautus alle							
	Female***				Male****			
	length		width		length		width	
	mean	range	mean	range	mean	range	mean	range
Head	284	270–296	465	452–473	255	234–265	395	380–406
Prothorax	196	192–198	398	310–411	160	146–166	332	312–343
Mesothorax Metathorax	162	156–166	–	–	135	130–146	–	–
Abdomen	1020	1004–1066	710	718–764	651	634–671	512	504–520
Total	1669	1643–1716	–	–	1197	1180–1248	–	–
Paramere (left)	–	–	–	–	64	62–66	–	–
Cephalic Index		1.64(1.60–1.71)				1.55(1.51–1.62)		

* 7 measured, ** 5 measured, *** 5 measured, **** 4 measured.

ered from *F. artica* and *P. alle*. While this is the first definite record of *Austromenopon* from *F. arctica*, specimens of this genus have previously been described from *P. alle* as *A. merguli* by Timmermann (1954). Keirans (1967) recovered *A. merguli* from *P. alle* taken in the New England States, Emerson (1972) noting this record. The present authors consider specimens from both hosts to be *Austromenopon nigropleurum*, (Denny, 1842) differences in their morphology and size (Table 3) being negligible. It seems likely that *A. merguli* is in fact a synonym of *A. nigropleurum*.

While many Mallophaga are host specific (Rothschild and Clay, 1961) and many workers erect new species for Mallophaga from different hosts even if only their size varies slightly from the type

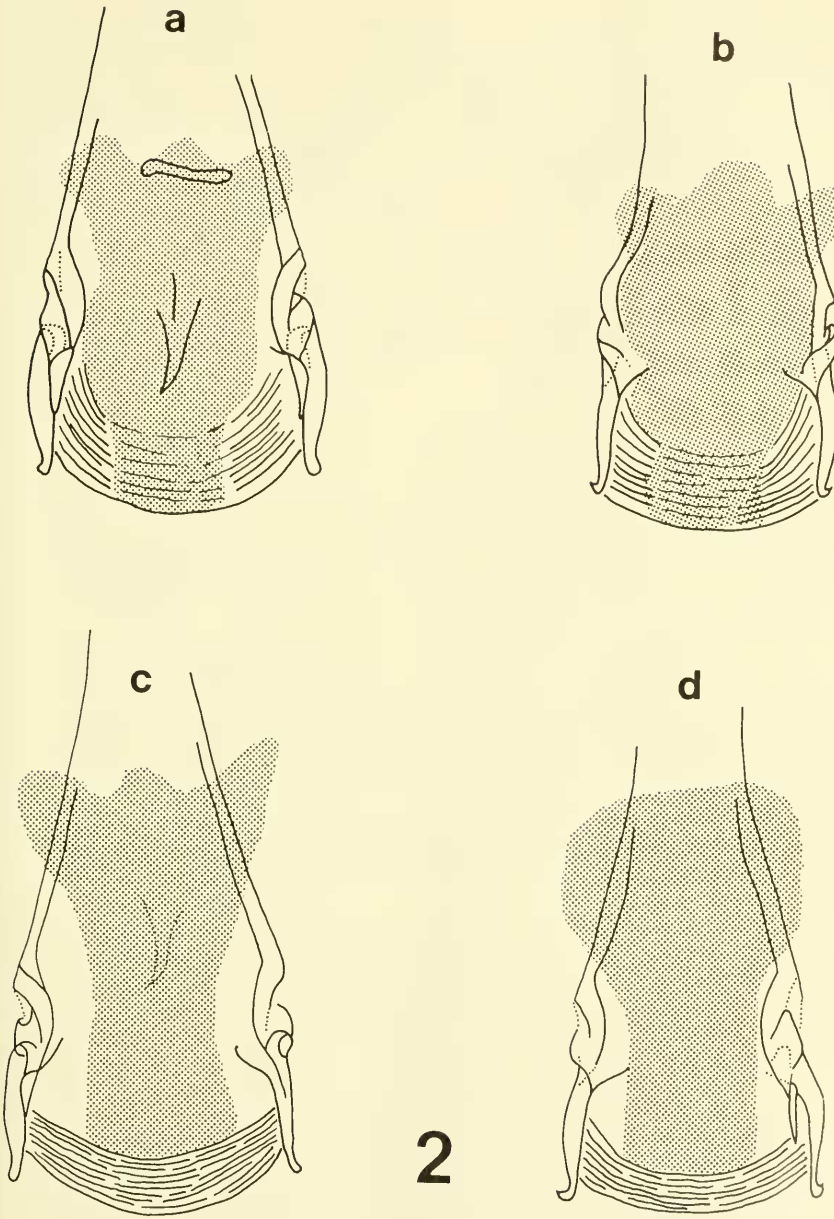

Fig. 2. Male genitalia, *Austromenopon* spp. a, *A. phippsi*. b, *A. nigropleurum* from *F. arctica*. c, *A. uriae*. d, *A. nigropleurum* from *P. alle*.

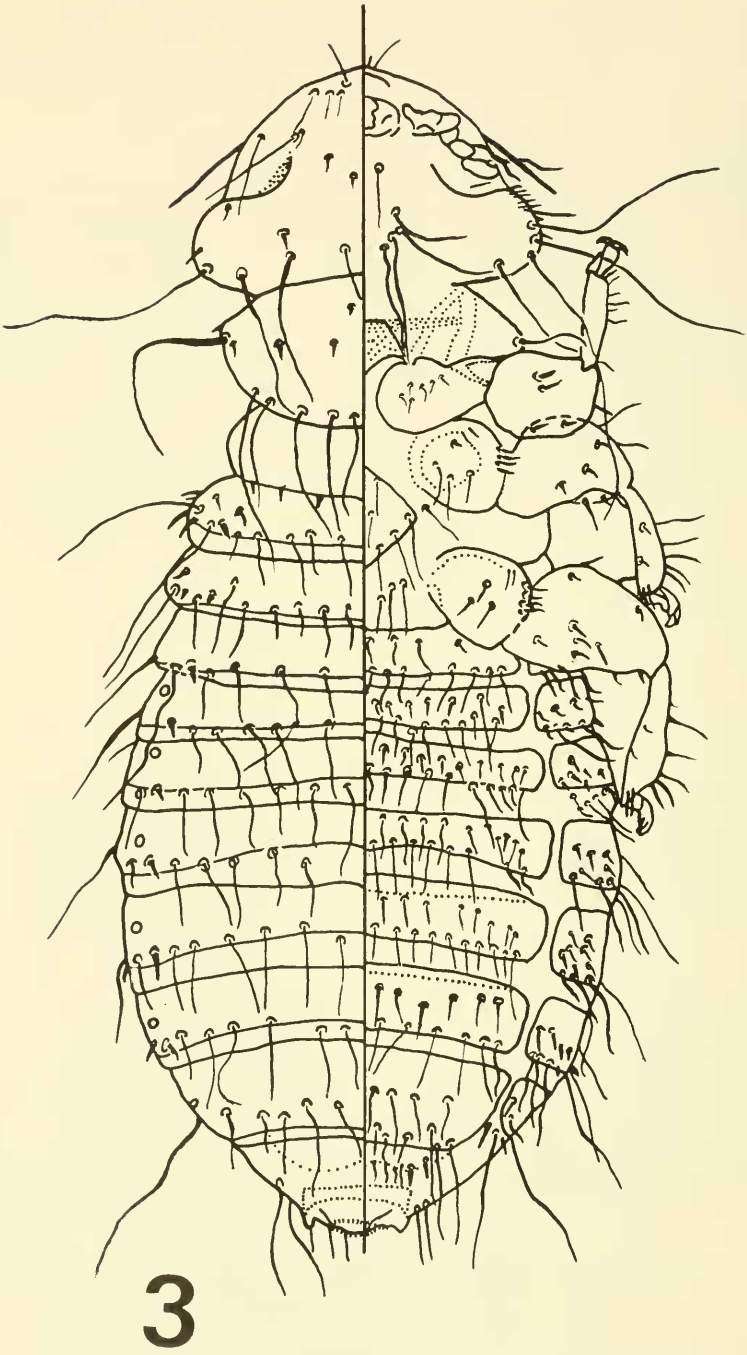

Fig. 3. *Austromenopon nigropleurum*. Dorsal-ventral view of female.

measurements, it becomes obvious in a case such as the present one that various species of birds within the same family and occupying the same, or very similar, habitats might bear the same species of Mallophaga with only minor size variations. It may well be that within families of birds, species-complexes of Mallophaga exist and a complete revision of certain genera, such as *Austromenopon*, is in order, with emphasis being placed more on the host-parasite relationships rather than morphology.

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